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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,935	09/22/2003	Nien-Lun Li	BHT-3230-70	5101

7590

12/15/2004

TROXELL LAW OFFICE PLLC
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FALLS CHURCH, VA 22041

EXAMINER

KERSHTEYN, IGOR

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/664,935

Applicant(s)

LI ET AL.

Examiner

Igor Kershteyn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Guth (1,699,201).

In figures 1-3 and 5, Guth teaches a modified centrifugal fan wheel 7, comprising: a hollow hub (not numbered) having a hollow portion, wherein a hollow hub axis is disposed at the center of said hollow portion of said hollow hub, along a top side surface of said hollow hub is a curved guiding inlet part (not numbered) and along a bottom side surface of said hollow hub is a curved surface 17 with a smooth fillet extending to a closed part (not numbered), and a set of blades 23, arranging around an outer part of said hollow hub, having an up 27 ring and a down ring not numbered), wherein an inner part of said down ring is connected to said closed part of said hollow hub, blades 23 are disposed between said up ring 27 and said down ring, wind holes (not numbered) are disposed equidistantly between each of said blades 23, and equidistant perforations 25 are arranged on the surface of said down ring, connecting to said wind holes between each of said blades 23.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guth (1,699,201) in view of Bubb et al. (3,692,428).

Guth teaches all the claimed subject matter except that he doesn't teach the ribs disposed at the hollow portion close to said hollow hub axis.

Bubb et al. in figures 3 and 4, teach a centrifugal fan wheel 10 having a hollow hub 12 having a hollow portion (not numbered) and ribs 18 disposed at the hollow portion close to a hollow hub axis.

Since Guth and Bubb et al. are analogous art because they are from the same field of endeavor, that is the centrifugal fan art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the hub of Guth with the ribs as taught by Bubb et al. for the purpose of improving structural rigidity of the hub.

Prior Art

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of six patents.

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Giddins (2,870,959) is cited to show a fan wheel having a hub, a set of blades and perforations on a bottom ring but fails to teach an upper ring and the perforations arranged between each of the blades.

Sprouse (2,803,398) is cited to show a fan wheel having a hollow hub, a set of blades, an upper and bottom ring but fails to teach perforations.

Savage (4,838,762) is cited to show a fan wheel having a hub, a set of blades, an upper ring and bottom ring, perforations but fails to teach the perforations arranged between each of the blades and on the bottom ring.

Wang (5,988,979) is cited to show a fan wheel having a hollow hub, a set of blades, an upper and bottom ring but fails to teach perforations.

Japan Patent No. 3233196 is cited to show a fan wheel having a hollow hub, a set of blades, an upper and bottom ring, and ribs but fails to teach perforations.

Japan Patent No. 59049395 is cited to show a fan wheel having a hub, a set of blades, an upper and bottom ring, and perforations but fails to teach the hub having a hollow shape.

Contact information

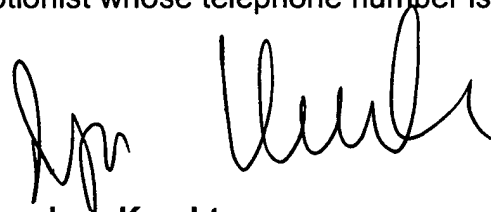
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is **(571)272-4817**. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on **(571)272-4820**. The fax number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK
December 10, 2004



Igor Kershteyn
Patent examiner.
Art Unit 3745



EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

12/10/04